Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended): A method of synchronizing an OFDM signal comprising:

receiving an OFDM signal including a plurality of long and short synchronization symbols, wherein at least one of the plurality of long and short synchronization symbols includes a predetermined plurality of time sequenced points;

correlating [[a]]the predetermined ~~number~~ plurality of time sequenced points in a ~~long symbol~~the at least one of the plurality of long and short synchronization symbols of the received OFDM signal against corresponding predetermined plurality of points in a reference symbol stored at the receiver;

obtaining a correlation peak between the at least one of the plurality of long and short synchronization symbols~~received long symbol~~ and the reference symbol, wherein the peak occurs at the time when the receiver acquires symbol synchronization between the predetermined plurality of time sequenced points in the at least one of the plurality of long and short synchronization symbols and the plurality of points in the reference signal stored at the receiver.

2. (Currently Amended) The method of claim 1 wherein the the at least one of the plurality of long and short synchronization symbols is a long symbol and ~~predetermined~~ the number of the predetermined plurality of time sequenced points is in a range of between 16 and 64 points.

3. (Currently Amended) The method of claim 1 further including the step of demodulating the OFDM signal's frequencies into the plurality of time sequenced points.

4. (Original) The method of claim 3 wherein the step of demodulating comprises applying a forward FFT to the signal, and the plurality of points applied to the forward FFT are

points in a time sequence which is generated by applying an inverse FFT to the amplitudes of the plurality of subcarriers.

5. (Currently Amended) The method of claim 1 wherein the step of correlating includes multiplying each point of the at least one of the plurality of long and short synchronization symbols by the corresponding predetermined points in the reference symbol to obtain a respective number of multiplication products.

6. (Original) The method of claim 5 wherein the step of obtaining a correlation peak comprises adding all the multiplication products into a correlation signal.

7. (Currently Amended) A computer usable medium having computer readable program code embodied therein for causing synchronization of an OFDM signal, the computer readable program code into a computer program product comprising:

instructions for receiving an OFDM signal including a plurality of long and short synchronization symbols wherein at least one of the plurality of long and short synchronization symbols includes a predetermined plurality of time sequenced points;

instructions for correlating [[a]]the predetermined ~~number~~ plurality of time sequenced points in ~~a long symbol~~the at least one of the plurality of long and short synchronization symbols of the received OFDM signal against corresponding predetermined plurality of points in a reference symbol stored at the receiver;

instructions for obtaining a correlation peak between the at least one of the plurality of long and short synchronization symbols~~received long symbol~~ and the reference symbol, wherein the peak occurs at the time when the receiver acquires symbol synchronization between the predetermined plurality of time sequenced points in the at least one of the plurality of long and short synchronization symbols and the plurality of points in the reference signal stored at the receiver.

8. (Currently Amended) The computer program product of claim 7 wherein the the at least one of the plurality of long and short synchronization symbols is a long symbol and

~~predetermined~~ the number of the predetermined plurality of time sequenced points is in a range of between 16 and 64 points.

9. (Currently Amended) The computer program product of claim 7 further including instructions for demodulating the OFDM signal's frequencies into the plurality of time sequenced points.

10. (Original) The computer program product of claim 9 wherein the instructions for demodulating comprise instructions for applying an inverse Fast Fourier Transform to the signal, and the plurality of points are time sequences of the frequencies.

11. (Currently Amended) The computer program product of claim 7 wherein the instructions for correlating include instructions for multiplying each point of the at least one of the plurality of long and short synchronization symbols by the corresponding predetermined points in the reference symbol to obtain a respective number of multiplication products.

12. (Original) The computer program product of claim 11 wherein the instructions for obtaining a correlation peak comprise instructions for adding all the multiplication products into a correlation signal.

13. (Currently Amended) A receiver component for synchronizing an OFDM signal comprising:

an input for receiving an OFDM signal including a plurality of long and short synchronization symbols, wherein ~~each~~ at least one of the plurality of long and short synchronization symbols includes a predetermined plurality of time sequenced points;

a correlator for correlating [[a]]the predetermined ~~number~~ plurality of time sequenced points in ~~a long symbol~~the at least one of the plurality of long and short synchronization symbols of the received OFDM signal against corresponding predetermined plurality of points in a reference symbol stored at the receiver; and

a peak detector for obtaining a correlation peak between the at least one of the plurality of long and short synchronization symbols~~received long symbol~~ and the reference symbol, wherein the peak occurs at the time when the receiver acquires symbol synchronization between the predetermined plurality of time sequenced points in the at least one of the plurality of long and short synchronization symbols and the plurality of points in the reference signal stored at the receiver.

14. (Currently Amended) The receiver component of claim 13 wherein the ~~predetermined~~ number of time sequenced points is in a range of between 16 and 64 points.

15. (Currently Amended) The receiver component of claim 13 further including means for demodulating the OFDM signal's frequencies into the plurality of time sequenced points.

16. (Original) The receiver component of claim 15 wherein the means for demodulating comprises means for applying a forward FFT to the signal, and the plurality of points applied to the forward FFT are points in a time sequence which is generated by means for applying an inverse FFT to the amplitudes of the plurality of subcarriers.

17. (Currently Amended) The receiver component of claim 13 wherein the correlator includes means for multiplying each point of the at least one of the plurality of long and short synchronization symbols by the corresponding predetermined points in the reference symbol to obtain a respective number of multiplication products.

18. (Original) The receiver component of claim 17 wherein the step of obtaining a correlation peak comprises means for adding all the multiplication products into a correlation signal.

19. (Original) The receiver component of claim 13 wherein the receiver component comprises at least one of: an application-specific integrated circuit; a digital signal processor; and a hardware description of an algorithm.

20. (Currently Amended) An apparatus for causing synchronization of an OFDM signal comprising:

means for receiving an OFDM signal including a plurality of long and short synchronization symbols, wherein at least one of the plurality of long and short synchronization symbols includes a predetermined plurality of time sequenced points;

means for correlating [[a]]the predetermined ~~number~~ plurality of time sequenced points in ~~a long symbol~~the at least one of the plurality of long and short synchronization symbols of the received OFDM signal against corresponding predetermined plurality of points in a reference symbol stored at the receiver;

means for obtaining a correlation peak between the at least one of the plurality of long and short synchronization symbols~~received long symbol~~ and the reference symbol, wherein the peak occurs at the time when the receiver acquires symbol synchronization between the predetermined plurality of time sequenced points in the at least one of the plurality of long and short synchronization symbols and the plurality of points in the reference signal stored at the receiver.

21. (Currently Amended) The apparatus of claim 20 wherein the at least one of the plurality of long and short synchronization symbols is a long symbol and the~~predetermined~~ number of the predetermined plurality of time sequenced points is in a range of between 16 and 64 points.

22. (Currently Amended) The apparatus of claim 20 further including means for demodulating the OFDM signal's frequencies into the plurality of time sequenced points.

23. (Currently Amended) The apparatus of claim 22 wherein the means for demodulating comprises means for applying an inverse Fast Fourier Transform to the signal, and the plurality of time sequenced points are time sequences of the frequencies.

24. (Currently Amended) The apparatus of claim 20 wherein the means for correlating include means for multiplying each point of the at least one of the plurality of long and short synchronization symbols by the corresponding predetermined points in the reference symbol to obtain a respective number of multiplication products.

25. (Original) The apparatus of claim 24 wherein the means for obtaining a correlation peak comprises means for adding all the multiplication products into a correlation signal.

26. (New) The method of claim 1, the obtaining a correlation peak further comprises starting a counter to generate a clock signal for a subsequent OFDM symbol when the peak occurs.

27. (New) The method of claim 2, wherein the long symbol is the first long synchronization signal.

28. (New) The method of claim 27, wherein the number of the predetermined plurality of time sequences points is at least 32.

29. (New) The receiver component of claim 13, further comprising:
a vectorizer coupled to the input for receiving the OFDM signal.

30. (New) The receiver component of claim 29, wherein the vectorizer is a serial-to-parallel shift register.

31. (New) The receiver component of claim 29, further comprising:

a counter coupled to the peak detector, wherein the counter is responsive to the peak detector to start a count sequence when the receiver acquires symbol synchronization, the count sequence providing clocking signals to the vectorizer for a subsequent OFDM signal.

32. (New) The receiver component of claim 31, wherein the counter is a modulo 80 counter.

33. (New) The receiver component of claim 31, further comprising:

at least one memory coupled to the vectorizer, wherein the counter provides clocking signals to the at least one memory for a subsequent OFDM signal.

34. (New) The receiver component of claim 13, further comprising:

a vectorizer coupled to the input for receiving the OFDM signal, the vectorizer receiving a clocking signal from the counter, wherein the vectorizer is a serial-to-parallel shift register;

a counter coupled to the peak detector, wherein the counter is responsive to the peak detector to start a count sequence when the receiver acquires symbol synchronization, the count sequence providing clocking signals to the vectorizer for a subsequent OFDM signal, wherein the counter is a modulo 80 counter; and

at least one memory coupled to the vectorizer, wherein the counter provides clocking signals to the at least one memory.

35. (New) The receiver component of claim 34, wherein the predetermined plurality of points in the reference signal correspond to a plurality of time sequenced points in a first long synchronization symbol of the plurality of long and short synchronization symbols.

36. (New) The receiver component of claim 35, wherein the number of the plurality of points in the reference signal is between 16 and 64.

37. (New) The receiver component of claim 35, wherein the number of the plurality of points in the reference signal is at least 32.

38. (New) The receiver component of claim 35, wherein the clocking symbols are employed for shifting symbols from the vectorizer to the at least one memory.